

NOTES ON THE NATURAL HISTORY OF FORT MACON, N. C., AND
VICINITY. (No. 3.)

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In the Proceedings of the Academy of Natural Sciences for 1871 a series of papers was commenced, by Dr. Elliott Coues, with the above title, and it was determined to continue them from time to time until the fauna and flora of the locality—so far as had been observed—should be described, but owing to unavoidable circumstances the publication of certain of the papers has been delayed until the present moment. It is now proposed to continue them under the joint authorship of Dr. Coues and the writer.

FISHES.

It will readily be seen, upon a perusal of a foregoing article describing the situation of Fort Macon, Beaufort harbor, and the adjoining waters, that the circumstances of its position render it peculiarly attractive and interesting to the student of Ichthyology, affording an admirable field for obtaining specimens, the following list showing that one hundred and seven species of fishes have been secured by Dr. Coues and the writer during the short period of their residence at that point.

In the identification of the specimens thanks are due for assistance to Prof. S. F. Baird, Prof. Theo. Gill, Prof. F. W. Putnam, and Prof. G. Brown Goode. The classification and names given are those adopted by Prof. Gill in his Catalogue of the Fishes of the East Coast of North America, Smithsonian Miscellaneous Collections, No. 283, 1873. Local names are given whenever known, but these names are mostly those used by the inhabitants of the region under discussion. Species marked with C. represent those secured by Dr. Coues, with Y. by Dr. Yarrow, C. and Y. by both.

Chilomycterus geometricus (Linn.), Kaup.

Spiny Toad-fish. Sea Porcupine.

Tolerably common; found in nets and taken with hook from wharf. Size from four to six inches. Is not eaten. C. and Y.

Tetrodon lævigatus (Linn.), Gill.

Puffer. Smooth Puffer.

Found in small streams running through salt marshes; but few seen. Found in nets, and is taken with the hook. Never eaten, being considered poisonous. Size, from three to six inches. Y.

Chilichthys turgidus (Mitch.), Gill.

Puffer. Balloon-fish.

Common; found in same localities as preceding species, and, like it, is generally found in nets, but will also take the hook. Not eaten. Y.

Lactophrys trigonus (Linn.), Poey.

Camel-fish. Box-fish.

Prof. Gill states that the appearance of this fish on the coast is accidental. Two specimens were found on the beach at Fort Macon after a southeast gale.

Alutera cuspicauda, De Kay.

File-fish.

Is probably rare, as but a single specimen was taken. C.

Ceratacanthus auriantiacus (Mitch.), Gill.

File-fish. Devil-fish.

Tolerably abundant, generally taken on outer beach in mullet nets. Specimens vary in size from three to eleven inches. Is not eaten. C. and Y.

Stephanolepis setifer (Bennett), Gill.

File-fish. Fool-fish. Devil-fish.

This species is more abundant than either of the two preceding species, and is taken in same localities and in same manner. Is not eaten. C. and Y.

Hippocampus hudsonius, De Kay.

Sea-horse. Horse-fish.

Specimens seen were very small, and the species is doubtless rare, as several were presented to the writer by the fishermen as great curiosities. The occurrence of this fish at Fort Macon increases its southern distribution by nearly one hundred and fifty miles, its limits, according to Gill, extending from Cape Cod to Cape Hatteras. C. and Y.

Syngnathus peckianus, Storer.

Pipe-fish.

Few specimens seen; of small size; taken in nets and by dredg-

ing on Bird Shoal (the home of *Lingula*), between Fort Macon and Beaufort. None seen after July. Size from two to six inches. C. and Y.

Fistularia tabaccaria (Linn.).

Trumpet fish.

Uncommon. One specimen was taken on the beach Sept. 25, 1871, 12 inches in length, another smaller one in November of the same year. Y.

Plagusia plagiusa (Linn.), Gill.

Flounder.

Abundant on shoals in Beaufort Harbor. Will take the hook freely, but is generally captured by spearing after nightfall. Is esteemed a valuable food fish. C.

Achirus lineatus (Linn.), Cuv.

Flat-fish. Flounder.

The same remarks will apply to this as to preceding species, except regarding abundance, the fishermen considering it rare. Y.

Pseudopleuronectes americanus (Walb.), Gill.

Flounder. Flat-fish.

Rare as compared with other species of this family, few specimens being seen.

Lophopsetta maculata (Mitch.), Gill.

Spotted flounder. Plaice. Fluke.

Exceedingly abundant from early in the spring until late in the fall on sand shoals and beach inside of inlet. Is taken in nets, and by hook and spearing at night. It is a peculiarity of the flounders to approach the shore at night and bury themselves in the sand, leaving only the snout and eyes exposed, and the fishermen being aware of this fact are enabled to capture very many in the following manner. A canoe is prepared with a grating or pan in the bow to contain fat pine, which, being lighted, the boat is propelled slowly by a person in the stern while another, armed with a spear, stands in the bow behind the fire. The craft is made to approach the shore closely, and as the eyes of the fish reflect back the fire-light they are easily seen, and the spear is driven into the sand a few inches behind the point where they appear. Hundreds of fishes are taken in this manner. In some instances the fisherman simply walks along the shore carrying in his hands a torch and spear. This species is considered excellent food. Size from one

and a half inch to twenty-eight and a half inches, the size of a specimen obtained in Sept. 1871. C. and Y.

Chænopsetta ocellaris (De Kay), Gill.

Chænopsetta dentata (Linn.), Gill.

Flounder. Flat-fish.

Both species tolerably abundant. C. and Y.

Chænopsetta oblonga (Mitch.), Gill.

Four-spotted Flounder. Fluke.

Not so abundant as preceding species, but is occasionally taken of large size. From this locality it is recorded as its farthest southern distribution. Y.

Urophycis regius (Walb.), Gill.

Spotted Codling.

Apparently rare, but one specimen having been secured. C.

Ophidium marginatum, Mitch.

Cusk.

Single specimen only observed. C.

Zoarces anguillaris (Peck), Storer.

Eel-pout.

In May, 1871, two specimens were taken by hook from the Fort Macon wharf; these were small in size; none seen thereafter. Y.

Blennius fucorum, Cuv. and Val.

Sea-weed fish.

A single specimen seen, which was found in refuse of net. Y.

Hypleurochilus punctatus (Wood), Gill.

Spotted sea-weed fish.

Tolerably abundant. C. and Y.

Batrachus tau, Linn.

Toad-fish. Oyster-fish.

Exceedingly numerous in small marshy creeks, and are a great nuisance to anglers. In April, 1871, a female was discovered watching her eggs, which had been deposited in an old boot-leg; the tide had receded, leaving her in about four inches of water, and, although attempts were made to drive her away, she preferred to remain, and was consequently captured. Eggs have also been discovered in old tin cans. The size of individuals seen varied from four to eight inches. C. and Y.

Astroscopus anoplus (Cuv. & Val.), Brevoort.

Star-gazer.

Rare, but a single specimen taken. C.

Prionotus punctatus (Bloch), Cuv.

Spotted flying-fish. Sea Robin.

Prionotus carolinus (Linn.), Cuv. and Val.

Flying-fish.

Both species tolerably abundant during spring and summer. Are taken in nets and by hook. Size six to ten inches. C. and Y.

Tautoga onitis (Linn.), Gthr.

Black-fish.

Apparently rare, as but few specimens were seen. Y.

Chærojulis grandisquamis, Gill.

But one specimen secured. Y.

Xiphias gladius, Linn.

Sword-fish.

Not seen, but reliable information received of its occasional appearance near Cape Lookout. Y.

Trichiurus lepturus, Linn.

Sword-fish. Hair-tail.

Not abundant, the few secured being taken just inside the surf in mullet nets. Have seen them in company with Gars swimming on surface of the water near the wharf feeding on small fishes, at which time they would snap at a baited hook, but none were captured. Are called "sword fish" by the fishermen, from their resemblance to the blade of a sword. Size averages from 30 to 40 inches; one specimen of 48 inches secured. C. and Y.

Sarda pelamys (Linn.), Cuv.

Bonito.

Tolerably abundant near Shackleford Banks. Y.

Orcynus secundi-dorsalis (Storer), Gill.

Bonito. Albicore. Sun-fish. Horse Mackerel.

First noticed in May, after which time it became tolerably abundant. A number of specimens were taken on the beach, upon which they had leaped from the water. Is frequently found in company with blue fish in September, and its appearance within the inlet is regarded by the fishermen as a sure indication of rough weather outside. Is not eaten. Size from four to twenty-four inches. Y.

Cybium maculatum (Mitch.), Cuv.

Spanish Mackerel.

Very abundant in latter part of August and September, and is frequently found with blue-fish. A favorable locality is near the southern point of Shackleford Banks, and it is there taken in nets and by hook; a great many are also taken near Cape Lookout in gill nets in September. Is highly esteemed as food, but is not often eaten fresh, being generally salted. Size from ten to thirty inches. C. and Y.

Cybium regale (Bloch), Cuv.

Spotted Mackerel. King-fish.

Not abundant, a single specimen only being seen. Y.

Vomer setipinnis (Mitch.), Ayres.

Horse-fish. Sun-fish.

Abundant in the fall, numbers being taken on outer beach in company with mullet. C. and Y.

Selene argentea, Lac.

Moon-fish. Sun-fish.

Same remarks apply as to the preceding species. C. and Y.

Argyriosus vomer, Lac.

Moon-fish.

Argyriosus capillaries (Mitch.), De Kay.

Moon-fish.

Not so abundant as the preceding species; are found in their company, and it will be seen that the fishermen of the locality recognize no specific differences, calling them all either moon- or sun-fish. First appear in Beaufort Harbor about May. C. and Y.

Paratractus pisquetos (Cuv. and Val.), Gill.

Yellow Mackerel.

A single specimen seen in September, 1871. C. and Y.

Carangus hippos (Linn.), Gill.

Horse Mackerel.

Carangus chrysos (Mitch.), Gill.

Yellow Mackerel.

Not abundant, a few seen in early fall, and one specimen fourteen inches long taken May, 1871.

Blepharichthys crinitus (Akerly), Gill.

Moon-fish. Shoemaker.

A few individuals taken in summer and fall; largest seen twelve inches long. Y.

Trachynotus carolinus (Linn.), Gill.

Pompano. Sun-fish.

Abundant in fall, and is taken in the mullet nets. Considered an excellent food-fish. C. and Y.

Naucrates ductor (Linn.), Raf.

Pilot-fish.

No specimens secured, but the appearance of the fish was so accurately described by several fishermen as to remove all doubts regarding its occasional occurrence. Y.

Halatractus zonatus (Mitch.), Gill.

Rudder-fish.

A single specimen observed. Y.

Poronotus triacanthus (Peck), Gill.

Not abundant. C. and Y.

Cynoscion carolinensis (Cuv. and Val.), Gill.

Speckled Trout.

Very abundant from February to June, April being considered the best month; are taken at this time in nets only, as they will not take the hook until September, upon their return from the northward. The roe in female specimens was found to be quite large in April. Size from six to thirty-six inches; one specimen, taken September, 1871, with hook, measured twenty-four inches in length and weighed three and three-quarters pounds. In 1872 the species first appeared January 9th, which was considered unusually early. C. and Y.

Cynoscion regalis (Bloch), Gill.

Weak-fish. Sea Trout. Gray Trout.

Not so abundant as preceding species, appearing with them in early spring; tolerably abundant in summer; taking the hook freely. Size ten to thirty inches. Y.

Pogonias chromis, Laup.

Drum.

Exceedingly abundant, resident, and is taken both within and outside of inlet. This species runs in schools in early spring, but in the fall is generally found alone, and will take the hook. A very large specimen was taken in September, while trolling for blue-fish. Is not considered a good table fish, the flesh being coarse, rank, and stringy. Size ten inches to five feet. C. and Y.

Liostomus xanthurus, Lacep.

Yellow tail.

Abundant in fall. Y.

Liostomus obliquus (Mitch.), De Kay.

Robin. Pin-fish.

Very abundant. C. and Y.

Bairdiella punctata (Linn.), Gill.

Yellow-finned Perch.

Occasionally seen. C.

Sciaenops ocellatus (Linn.), Gill.

Spotted Sea Bass.

Not abundant; a few seen in fall. C. and Y.

Menticirrhus alburnus (Linn.), Gill.

Whiting.

Menticirrhus nebulosus (Mitch.), Gill.

King-fish. Whiting.

Menticirrhus littoralis (Holbr.), Gill.

Sea Mullet.

These species are all more or less abundant in the fall, when they are found in company with the mullet on sea-beach. C. and Y.

Micropogon undulatus (Linn.), Cuv. and Val.

Croaker. Crocus.

Abundant, and can be taken from March until August. Size four to eight inches. C. and Y.

Lagodon rhomboides (Linn.), Holbr.

Not abundant. C. and Y.

Archosargus probatocephalus (Walb.), Gill.

Sheepshead.

Abundant in early spring; will not take the hook until later in season. In 1871 large numbers were taken in the bight of Cape Lookout in nets. Size eight to twenty-four inches. A small specimen was taken January 30, 1872; an early arrival. Y.

Stenotomus argyrops (Linn.), Gill.

Scup. Porgy.

Abundant. C. and Y.

Prof. F. W. Putnam, to whom is due the identification of the specimens collected by Dr. Coues, states that in the collection he found an individual resembling *S. argyrops*, but which differed in

several essential particulars, having a well-marked black blotch on the tail immediately posterior to the dorsal fin, a very fine margin of black on the membrane of the spine of the dorsal fin, the ventrals dusky. D. xii. 14; A. iii. 13.

Hæmulon arcuatum, Cuv. and Val.

Hog-fish. Grunts.

Very abundant in early spring and summer, and are generally found in the marshy creeks inside of inlet. Size four to eight inches. Y.

Orthopristis fulvomaculatus (Mitch.), Gill.

Spots.

Abundant; resident in same localities as preceding species, and may be taken at all seasons of the year. Size four to eight inches. The young of this species found in company with young mullet in January, 1872. C. and Y.

Ephinephelus morio (Cuv.), Gill.

Grouper.

Very rare; one specimen only seen. Y.

Centropristis atrarius (Linn.), Barn.

Sea Bass. Black Bass.

Numerous off Shackleford Banks, in the vicinity of Cape Look-out. C. and Y.

Roccus lineatus (Bl. Schn.), Gill.

Striped Bass. Rock. Rock-fish.

Full-grown specimens seldom seen in the immediate vicinity of Fort Macon, but the young are abundant. In the New River, one of the affluents of Beaufort Inlet, adults are numerous, and in the Neuse they are exceedingly plenty. Y.

Morone americana (Gmelin), Gill.

White Perch.

No specimens seen in Beaufort Inlet, but they abound in the New and Neuse Rivers. Y.

Parephippus faber (Cuv.), Gill.

Horseman. Moon-fish. Pogy.

Not abundant; a few specimens taken from mullet nets in September. C. and Y.

Pomatomus saltatrix (Linn.), Gill.

Blue-fish. Tailor. Snapping Mackerel.

This species appears in Beaufort Inlet in early spring, but is

taken only in nets. In June it commences to take the hook, but the months of August and September are the best for trolling. At this time enormous numbers may be found in schools, swimming alongside shoals in tolerably rough water. On the 23d day of September, 1871, four persons, in four hours, took by trolling 660 Blue-fish. During the latter part of this month, in the same year, enormous schools were noticed in and near the ship channel, feeding upon the red-billed Gar, so-called, *Hemiramphus unifasciatus*, Ranz. The stomachs of individuals taken were literally crammed with these fishes. The very large specimens of blue-fish occasionally met with in the markets in January never enter Beaufort Inlet; they are taken on the beach from Cape Lookout northward, the run lasting sometimes two months, occasionally only a week or ten days. During the last week of December, 1871, large schools of young blue-fish were noticed in Beaufort Inlet swimming from the southward, apparently making for the sea; their size about four inches. C. and Y. .

Elacate canadus (Linn.), Gill.

Crab-eater.

The fishermen speak of a fish which is supposed to be this species; none were seen.

Leptecheneis naucratus (Linn.), Gill.

Sucker.

Uncommon; two specimens seen. C. and Y.

Echeneis remora, Linn.

Sucker.

Uncommon; a few specimens seen, which were taken by the fishermen on Shackleford Banks. They stated that these fish were found ? in the mouths of sharks. Size of specimen six inches. Y.

Sphyræna borealis, De Kay.

Barracuta.

Uncommon; a few taken occasionally near Cape Lookout.

Mugil lineatus, Mitchell.

Striped Mullet. Mullet.

This species is the most abundant of the locality, and affords sustenance and employment to thousands of persons on the coast of North Carolina. From the month of May, when small-sized individuals appear, fishing continues during the entire summer

with gill and small draw nets, and in the latter part of August, as the fish commence to school preparatory to migration, the regular seine fishing commences, and continues frequently until November. The schools appear to come from the northward through Albemarle, Pamlico, and Cove Sounds, gradually working their way to the southward. Their departure through the various inlets seems to depend upon a favorable state of the wind, which should be from the northward, for it has been noticed frequently that when the wind hauled, the schools of mullet already without the harbor have suddenly turned, re-entering the inlet, and pursued their course southward through Bogue Sound. Their movements through the water are quite slow, and a person without exertion may keep pace with them walking upon the beach. The numbers taken are simply enormous, sometimes as many as 500 barrels being secured at a single haul. It was estimated by competent observers that not less than 12,000 barrels of mullet were captured on the coast of North Carolina Friday, September 22, 1871. Regarding the spawning grounds of *M. lineatus* considerable uncertainty exists. At the time of their arrival at Fort Macon, in August and September, the females are enormously distended with roe, some, however, being more so than others, and it is supposed that the process of oviposit takes place from July until December, many remaining in the sounds for the purpose. Many schools of young mullet have been seen in Beaufort harbor during December and January, which could have been but a few weeks old. These young fishes suffer from a curious disease, which is characterized by the presence of a gradually increasing film upon the eyes, which finally destroys the sight, and myriads perish from this cause. They also suffer from parasites, one of which is long and thread-like, with a stellate head, the other, called by the fishermen "sea-louse;" these parasites have never been noticed by the writer upon adults. Size from one and a half inches to thirty. C. and Y.

Chirostoma notata (Mitch.), Gill.

Silver-sides. Smelt.

Atherina carolina, Val.

Sand-smelt.

Rather uncommon, a few specimens only seen. C. and Y.

Belone longirostris (Mitch.), Gill.

Bill-fish. Gar.

Is quite abundant; appearing in Beaufort Inlet in February. At this time it swims in schools, and many are taken in nets. When swimming near the surface of the water it will readily take the hook. Is eaten by poor fishermen and negroes, and the flesh is said to be good. The largest specimen seen measured twenty-four inches in length. C. and Y.

Exocoetus melanurus, Val.

Flying-fish.

Occasionally seen. Y.

Hemirhamphus unifasciatus, Ranzani.

Red-billed Gar.

Abundant during latter part of August and entire month of September. This species appears to feed along the beach in shallow water, and may be readily taken at night with a torch and scoop net. It is also found in the channel and along the edges of shoals where blue-fish congregate, this fish devouring enormous numbers. The small fry of fishes appear to be attracted by the bright red caruncle on the end of the lower mandible of *H. unifasciatus*, and, swimming near to it, lose their lives as a penalty for curiosity. C. and Y.

Scomberesox scutellatus, Lesueur.

Skipper. Sea-pike.

First observed in June, 1871, and in August of the same year several were taken with hook and line inside the inlet. Are not eaten by the fishermen, who declare them poisonous. Size twenty-four inches in length. Y.

Cyprinodon variegatus, Lac.

Minnow.

Fundulus pisculentus (Mitch.), Val.

Mummichog. Minnow.

Hydrargyra majalis (Walb.), Val.

Hydrargyra swampina, Lac.

Minnow.

These four species are exceedingly abundant in the marshy creeks, and are all called by the residents "Minnows." C. and Y.

Albula conorhynchus, Bloch and Schneider.

Lady-fish.

Not observed by Dr. Coues or the writer, but is admitted to the list upon the authority of a reliable fisherman of the locality, Capt. A. Guthrie.

Elops saurus, Linn.

Sea-Pike.

Occasionally noticed. C. and Y.

Megalops thrissoides (Bl. and Sch.), Günth.

Jew-fish. Tarpum.

Said by fishermen to be very rare. None observed.

Brevoortia menhaden (Mitch.), Gill.

Menhaden. Mossbunker. Fat-back. Yellow-tail.

Very numerous in August and September; large numbers are netted and used for oil and manure. C. and Y.

Alosa sapidissima (Wilson), Storer.

Shad.

Not abundant in vicinity of Fort Macon, but in the Neuse are excessively so. C. and Y.

Opisthonema thrissa, Gill.

Hairy-back. Thread Herring.

This species, as a rule, appears early in June, and is regarded as the avant-courier of the herring, so-called, *P. pseudoharengus*; it is abundant, but is not eaten to any extent. Size ten to twelve inches. Y.

Pomolobus pseudoharengus (Wilson). Gill.

Herring. Blue-back. Alewife.

Not abundant except in Neuse River, and the sounds further to the northward. In fact its scarcity near Fort Macon is such that no regular fishing is followed with a view to its special capture. Y.

Pomolobus mediocris (Mitch.), Gill.

Hickory Shad. Hicks. Fall-Shad.

Abundant; first noticed in March, 1871. Y.

Engraulis brownii (Gmel.), Val.

Smelt.

Several specimen secured, but the species is not common. Prof. Putnam, after an examination of specimens sent him, states as follows: "Mitchell's description of *Clupea vittata* does not differ from Günther's of *E. brownii*, but Günther's description of *E.*

mitchellii differs in anal rays and in length of maxillary, which does not agree with my specimens from Fort Macon."

Ælurichthys marinus (Mitch.), Baird and Girard.
Fork-tailed Catfish.

Ariopsis milberti (Val.), Gill.
Sea-Cat. Catfish.

Both species are occasionally met with near the Fort Macon wharf, but are by no means abundant. C. and Y.

Anguilla bostoniensis (Les.), De Kay.
Eel.

Very abundant in marshy creeks. C. and Y.

Acipenser oxyrhynchus, Mitch.
Sharp-nosed Sturgeon.

Acipenser brevirostris, Lesueur.
Short-nosed Sturgeon.

Both species said to be abundant in the North, New, and Neuse Rivers.

Ceratoptera vampirus (Mitch.), Gill.
Devil-fish.

None observed, but the fishermen state they are occasionally seen.

Ætobatis narinari, Müll. and Henle.
Sting-Ray. Lady-Ray.

Very common, sometimes growing to a large size. C. and Y.

Pteroplatea maclura, Müll. and Henle.
Sand-Skate. Butterfly Ray.

Very common in fall outside of inlet. Nov. 5, 1871, a specimen was captured five feet in width four feet in length. C. and Y.

Trygon centrura (Mitch.), Gill.
Sting-ray. Whip-ray. Stingarce.

Very common. Migration takes place southward in latter part of October. In July, 1871, a very large specimen was found expiring upon the beach; upon dissection the liver and gall-bladder were found filled with worms. C. and Y.

Torpedo occidentalis, Storer.
Cramp-fish. Torpedo. Electric Ray.

None observed; fishermen state they are rarely seen.

In this connection it may be mentioned that Capt. Absalom Guthrie, an intelligent fisherman of Shackleford Banks, stated to

the writer that upon a certain occasion, in removing fishes from his net, he received a very perceptible electric shock from a fish resembling the common toad-fish, *B. tau*, and upon repeating his examination of the animal he experienced the same sensation a number of times; when touching the head, the fish appeared to advance this organ as if eager to discharge the electric fluid. Expressing incredulity, a number of fishermen were called who corroborated Capt. Guthrie's statement in every particular. Some three or four specimens had been found in the net at this time, since which none have been seen, although a large reward was offered for living specimens.

Raia lævis, Mitch.

Skate. Winter Skate.

Common. Y.

Pristis antiquorum (Linn.), Lath.

Saw-fish.

Not observed in the immediate vicinity of Fort Macon, but is abundant in the brackish rivers emptying into Bogue and Cove sounds. It is frequently taken in the New River, and attains a considerable magnitude, the writer having secured a so-called "saw" five feet in length from an individual over sixteen feet long which had been captured in this river. The fishermen state that this species is exceedingly hostile to the porpoise, and will fight it whenever opportunity occurs. Y.

Isuropsis dekayi, Gill.

Mackerel-shark.

Very rare, a single skeleton having been seen. Y.

Eugomphodus littoralis, Gill.

Sand-shark. Shovel-nose.

Tolerably abundant both within and outside of inlet. Y.

Sphyrna zygaena (Linn.), Mull. and Henle.

Hammer-head Shark.

But a single individual seen. Y.

Reniceps tiburo (Linn.), Gill.

Shovel-head Shark.

Uncommon. Y.

A few other species of this family were noticed, but not identified.

Branchiostoma caribæum, Sundevall.

Lancelet.

This curious species, so far as known, is to be obtained in but one locality, near Fort Macon, viz., on Bird Shoal, which lies to the southward of Beaufort city; some dozen or more specimens were obtained by dredging. Y.

A number of species of fresh-water fishes have also been obtained from the rivers contiguous to Fort Macon, but it has been deemed advisable to confine this list to the marine forms almost exclusively. It should be mentioned that the inquiries regarding the preceding species of fishes were made at the suggestion and under the direction of Prof. S. F. Baird, U. S. Com. of Fish and Fisheries.